



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D3391-025
Job Sheet 176048



Part No: D3391-025

Job Qty: 1 ea

Part Name: Aft Tube Assembly



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 4/16/18

Job Tracking No:

Due Date: 5/24/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV J SHEETS 9,10,11 IPP Rev B 06-02-07 ECN773 dwg rev. D EC IPP Rev:C 06-03-28 Update
Manuf. Instructions JLM IPP rev D 07.03.20 revF dwg EC IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified
by: DD IPP Rev:F 07-11-13 ECN 1056 DD verified by: EC IPP Rev:G 08-09-10 revH as per dwg DD verified
by:EC IPP Rev:H 11.11.14 AS PER REV.I DD verified by:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		5/23/18	0.00	0.00	Start Up Crosstubes		DAS
100	Mori Seiki	1 pcs		5/23/18	2.49	4.17	Mori Seiki TL-40		56
110	QC	1 pcs		5/23/18	0.00	0.00	QC2-1		9-89
112	QC	1 pcs		5/23/18	0.00	0.00	QC5		EB
120	CNC Vertical Machining	1 pcs		5/23/18	0.00	2.63	HAAS1-3		kt 2018-05-16
130	QC	1 pcs		5/23/18	0.00	0.00	QC2 Machining-2		kt 2018-05-16
140	QC	1 pcs		5/23/18	0.00	0.00	QC8 Machining-2		mk 18/05/24
150	Skidtubes	1 pcs		5/23/18	0.00	1.03	Skidtubes-4		in 6/24
160	CNC Bend Skidtubes	1 pcs		5/23/18	0.00	1.33	CNC Bend Skidtube		in 6/24
170	QC	1 pcs		5/23/18	0.00	0.00	QC5		BE
180	Skidtubes	1 pcs		5/23/18	0.00	1.03	Skidtubes-4		BE
190	QC	1 pcs		5/23/18	0.00	0.00	QC5		DAS 38
200	HandFinish	1 pcs		5/23/18	0.00	0.58	HandFinish1		SA 18-06-05
210	QC	1 pcs		5/23/18	0.00	0.00	QC7-2		BE mba
220	Skidtubes	1 pcs		5/23/18	0.00	1.41	Skidtubes-4		in 6/24 DAS 38
230	QC	1 pcs		5/23/18	0.00	0.00	QC5		BE 38
235	HandFinish	1 pcs		5/23/18	0.00	0.58	HandFinish2		SA 18-06-12
240	SprayPaint	1 pcs		5/23/18	0.00	0.25	Spray Paint		Jun 13/06/2018
242	Outsource	1 pcs		5/23/18			ATE003-VC		
250	QC	1 pcs		5/23/18	0.00	0.00	QC14		all 18-6-25
260	HandFinish	1 pcs		5/24/18	0.00	0.58	HandFinish4		all 18-6-28
270	QC	1 pcs		5/24/18	0.00	0.00	QC5		all 18-6-26
280	Packaging	1 pcs		5/24/18	0.00	0.00	Packaging3-1		all 18-6-26
290	QC21-SA	1 Ea		5/24/18	0.00	0.00	QC21		21 JUN 26 2018

Part Op 100 - Turn as per Folio FA599 Rev: ____ & Dwg D3391 Rev: ____ ***ensure steady rest is turning true*** REMOVE
Descriptions: STEADY REST AND MACHINING MARKS****

120 - 1-Machine as per Folio FA 599 Rev: ____ & Dwg D3391 Rev: ____

140 - ***INSPECT INSIDE BORE***

150 - 1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

160 - Form as per Dwg D3391 Using Bend Prog 3391025

180 - 1-Open Aft cap pilot hole to .208" as per Dwg D3391 2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only. 3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217 Wearplate Jig . *****Do

Work Order update only

DISPOSITION	
Work Order: _____	Reword
Part No. _____	Scr
NCR No. _____	Use-as
Date : _____	Suspected Unapproved
Step #:	
Description Work Order Deviation	

Container No: S062853



Part: D3391 - 025

Job No: 176048

Serial No/Batch: S062853

Revision:

Inspector:

Date: 04/19/18

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1-613-632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Root Cause				FAULT CATEGORY									
Environment		No Re-verification		Pressure/Forced		Temperature/Cure		Power Loss/Surge		Positioned Wrong			
Design		Operator		Bending		Set-up		Folio/Program		Outside Dimensions			
Doc/Data		Offset/Setup		Centre Not Concentric		BOM/Route		Grain		Over/Under tolerance			
Equip/Tooling		Supplier		Cracks		Broken/Damage/Defect		Weld		Part Incorrect			
Handling/Pre		Training		Crimp/Kink/Ripple/Wave		Inspection Incomplete/Unqualified		Wrong Stock Pulled		Part Lost/Missing			
Material		Use for Testing		Cuffs		Contamination		Out of Sequence		Part Moved			
Internal Transport		Poor Information		Crushing		Countersink		Off-set		Drawing			
Tribal Knowledge		Rushing		Heat Treat		Cut Too Short		Misabeled		Finish			
LOA		Product Improvement		Wave/Twist in Tube		Instructions Incomplete/Unclear		Fit/Function		Misread			
Substation		Process Improvement		Marks/Chatter		Drill Holes		Misaligned/off center		Turning Sequence			
Past Expiry Date		Manufacturing Process											
Misidentified		Past Due											
OTHER :													

Not Open To Finished Size***** 4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2 previously drilled aft wearplate holes. 5-Open wearplate holes to 0.297" and c'bore as per dwg D3391 6-Open up all float bag holes to 0.328" and c'sink as per Dwg D3391. 8- Scribe batch # on fwd end
 220 - 1- Instal spacers as per dwg D3391 A/R Magnabond 6398 Batch: M13703 exp. date : 18-08 cure time 12hrs as per QSI0015 2- Grind crossbolts flush 3- Back drill using #9 drill 4- Touchup Magnabond 5- Deburr
 235 - AND REALODINE AS PER PAR09-043
 240 - PRIME AS PER DWG AND QSI005 4.2.1.3.3 138747 paint 138863
 260 - 1-Install inserts as per Dwg D3391 2-Install Aft Cap as per Dwg D3391 A/ R Sikaflex-241/-291 M137787
 Sikaflex expiry date: 12/19 3- INSTALL WEARPLATES AS PER DWG
 290 - 5- Detail DD, open (5) forward wearplate holes 0.375", then use DT10247 and drill holes for nutplates and c'sink.
 6-Open wearplate holes to 0.297" and c'bore as per dwg D3391. ***SIX FARTHEST AFT HOLES ONLY*** 7-Open up all float bag holes to 0.328" and c'sink as per Dwg D3391. 8-Deburr 9- Scribe batch # on fwd end

004093

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6014-090	Aluminum Extrusion	1 Ea (1 ea)	90-Start up Operation	
D3670-4-200	Bushing	4 Ea (4 ea)	220-Skidtubes	<u>5021404</u>
ALS4-1032-130	Rivnut	8 Ea (8 ea)	260-HandFinish	<u>5008959</u>
ALS4-1032-225	Rivnut	4 Ea (4 ea)	260-HandFinish	<u>5058130</u>
AN3C4A	Bolt	6 Ea (6 ea)	260-HandFinish	<u>5068642</u>
AN3C5A	Bolt	4 Ea (4 ea)	260-HandFinish	<u>5057153</u>
D2646	Aft Cap	1 Ea (1 ea)	260-HandFinish	<u>F165010</u>
D3672-1	Washer, Phenolic	2 Ea (2 ea)	260-HandFinish	<u>F156074</u>
D4095-047	Wearpad Aft	1 Ea (1 ea)	260-HandFinish	<u>5025094</u>
D4095-049	Wearpad Aft	1 Ea (1 ea)	260-HandFinish	<u>5018296</u>
MS20601-AD4W3	Rivet	12 Ea (12 ea)	260-HandFinish	<u>5066193</u>
MS20601-AD4W7	Rivet	8 Ea (8 ea)	260-HandFinish	<u>M137148</u>
MS21075L5	Nut Plate	10 Ea (10 ea)	260-HandFinish	<u>5004858</u>
NAS1149C0332R	Washer	10 Ea (10 ea)	260-HandFinish	<u>5056493</u>

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6014-090	1	27	0
220-Skidtubes	D3670-4-200	4	48	0
260-HandFinish	ALS4-1032-130	8	14,777	0
	ALS4-1032-225	4	5,662	0
	AN3C4A	6	2,277	0
	AN3C5A	4	2,095	0
	D2646	1	100	0
	D3672-1	2	1,071	0
	D4095-047	1	11	0
	D4095-049	1	38	0
	MS20601-AD4W3	12	249	0
	MS20601-AD4W7	8	185	0
	MS21075L5	10	174	0
	NAS1149C0332R	10	6,563	0

Part Specifications

Specifications could not be found.

DART AEROSPACE LTD	Work Order: 176048
Description: Float Skidtube (412)	Part Number: D3391-3
Inspection Dwg: D3391 Rev: J	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.0	✓		TAPE	
3.500	+/-0.010	3.5015	✓		VERN	
Ø3.200	+/-0.010	3.201	✓			
Ø3.750	+/-0.010	3.7495	✓			
30° x 0.060 chamfer	+/-0.010	0.068	✓			
88.93	+/-0.030	DAS 88.93	✓		TAPE	

Measured by: 9-89	Date: 2018-04-18
Audited by:	Date:

HAAS Section						
1.526	+0.000/-0.030	1.508	✓			
7.500	+/-0.010	7.504	✓			
27.750	+/-0.010	27.750	✓			
31.750	+/-0.010	31.750	✓			
35.250	+/-0.010	35.250	✓			
3.300	+/-0.010	3.305	✓			
0.200	+/-0.010	0.200	✓			
3.520	+/-0.010	3.521	✓			
0.687	+0.010/-0.000	0.688	✓			
R0.062	+/-0.010	0.0625	✓			
Ø0.484	+0.005/-0.001	0.484	✓			

Measured by: DAS 1 KJ	Date: 2018-05-16
Audited by: 9-89	Date: 18/05/24

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	
H	11.06.21	Dimension 44.995 removed	KJ	
I	12.05.15	Dwg Rev updated	KJ	
J	12.05.23	Dimension updated	KJ	
K	12.10.15	88.93 dimension removed	KJ	
L	12.11.28	88.93 dimension added	KJ	
M	16.06.23	Dimensions updated per Rev J	KJ	

